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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,109	08/26/2003	Ramanan V. Chebiam	42P13235D	5489

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EXAMINER

KLEMANSKI, HELENE G

ART UNIT PAPER NUMBER

1755

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,109

Applicant(s)

CHEBIAM ET AL.

Examiner

Helene Klemanski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/26/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 3, 4, 6 and 7 (two occurrences), the phrase "selected from" is considered indefinite since this is improper Markush language. It is the examiner's position that other materials could be present in the Markush group that were not intended by applicants by the use of the phrase "selected from" since this phrase does not exclude other materials. The examiner suggests the language "selected from the group consisting of" in place of this phrase.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Endo et al.

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Endo et al. teach an electroless plating bath comprising metallic ions such as silver, gold, nickel, cobalt or palladium ions, a reducing agent which contains no metallic ions such as tartaric acid, a saccharide, hydrazine or derivative thereof, aldehyde, polyol, hypophosphorous acid, a hypophosphite or a boron hydroxide compound, a complexing agent which contains no metallic ions such as EDTA, ammonia, triethanolamine or a compound containing a carboxylic acid group and a pH control agent such as tetramethylammonium hydroxide. The bath can further contain additional metallic ions such as tungsten ions, a pH buffer such as a monocarboxylic acid, dicarboxylic acid or oxycarboxylic acid (i.e. same as complexing agents) and a surfactant. The bath has an alkaline pH such as 10 and operates at a temperature of 35-90°C. See col. 2, lines 8-20, col. 4, lines 32-56, col. 4, line 66 – col. 5, line 64, col. 6, lines 1-65, col. 7, lines 4-15, col. 8, lines 15-25, col. 12, lines 40-55, col. 13, lines 1-15 and claim 1. The electroless plating bath as taught by Endo et al. appears to anticipate the present claims.

5. Claims 1, 2, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Leever et al.

Leever et al. teach an electroless plating bath comprising 0.01-1.0 M of a soluble source of nickel ions, a reducing agent such as sodium hypophosphite or dimethylamine borane, a complexing agent such as hydroxyacetic acid, lactic acid, tartaric acid, citric acid, maleic acid, gluconic acid, glycine, alanine, EDTA and pyrophosphates, a pH adjusting agent such as ammonium hydroxide, a small quantity of a soluble acetylenic compound and optionally a buffering agent. Leever et al. further teach that most of the

complexing agents, with the exception of the hydroxy acids, have pK values of about 4.5 and can serve as buffering agents (i.e. complexing and buffering agent consisting of essentially a single agent). The bath may further contain metal brighteners such as molybdenum ions (i.e. secondary metal) and a surfactant. The bath has a pH of 4-12 and operates at a temperature of 160-200°F (71.1-93.3°C). See col. 1, line 65 – col. 2, line 3, col. 3, line 38 – col. 4, line 26, col. 6, lines 1-5, example 1 and claims 1, 9-12, 15 and 23-26. The electroless plating bath as taught by Leever et al. appears to anticipate the present claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al.

Endo et al. is cited and relied upon for the above stated reasons. Endo et al. fails to specifically exemplify the addition of a secondary metal or the use of a borane-containing reducing agent such as dimethylamine borane as claimed by applicants.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the tungsten ions as a secondary metal and to use the specific borane-containing reducing agent such as dimethylamine borane as claimed by applicants as

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Endo et al. also discloses the use of these components but fails to show an example incorporating them.

8. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leever et al.

Leever et al. is cited and relied upon for the above stated reasons. Leever et al. fails to specifically exemplify the addition of a secondary metal or the use of a borane-containing reducing agent such as dimethylamine borane as claimed by applicants.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the tungsten ions as a secondary metal and to use the specific borane-containing reducing agent such as dimethylamine borane as claimed by applicants as Leever et al. also discloses the use of these components but fails to show an example incorporating them.

Allowable Subject Matter

9. Claims 8 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art cited teaches or fairly suggests the use of $(\text{NH}_2)\text{SO}_4$ as the complexing and buffering agent consisting of a single agent as claimed by applicants.

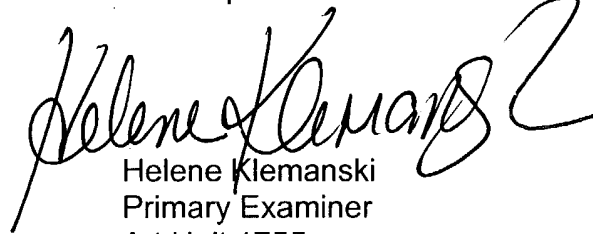
Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is 571-272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.


Helene Klemanski
Primary Examiner
Art Unit 1755


HK
May 24, 2004